Abstract of the Disclosure

Process and apparatus for regenerating spent acid liquor includes a primary roasting furnace for evaporating a substantial portion of the liquid from the spent acid to produce acid vapors and partially roasted metal salts. The partially roasted metal salts are transferred to a secondary roasting chamber where the acids adhering to the surface of the metal salts is vaporized and the metal salts are oxidized. The acid vapors from the primary roasting furnace are then transferred to an absorption column to regenerate the acid. The primary roasting furnace is operated at a different temperature from the secondary roasting chamber and has different retention times for the metal salts. The secondary roasting chamber includes a raking device to mix and convey the metal salts during the secondary roasting step to produce a uniformly roasted metal oxide.